Remediation and ground engineering on an inner-city housing estate

Peckham, South London

Client: **Higgins Construction Ltd and Notting Hill Housing Association**
Value: **£825k**
Site area: **1.47ha**
Timeframe: **12 weeks**
End use: **residential**

Challenge

We were contracted to remediate the derelict site of a former council estate in central London, delivering an engineered development platform to a bespoke design.

Situated on a busy high street, challenges on this site included:

- 10,000m3 of asbestos containing materials (ACMs) and asbestos fibres present in demolition waste
- Requirement for an EA-approved materials management plan detailing how material could be re-used onsite, avoiding disruption to traffic and unnecessary landfill deposits
- The need to remove obstructions down to 4m prior to development of an engineered development platform

This project was one of the first to implement the JIWG decision support tool from the CL:AIRE CAR-SOIL guidance.

Solution

We created an MMP, deploying our own Environmental Permit to carry out asbestos remediation.

Our team combined asbestos remediation, obstruction removal and earthworks into a single workflow, delivering the project in **under 12 weeks.**

Remediation strategy grids were uploaded to in-house 3D GPS enabled excavators, allowing real-time on-site regulation and tracking, and removing need for manual setting out.

We carried out reassurance sampling and remediation of 10,000m3 of material. Material containing ACM in the form of cement-bound asbestos was picked, stockpiled and analysed. 4,800m3 of suitable material was then screened to produce 6F2.

A pocket of hydrocarbon contamination was treated by ex-situ bioremediation, allowing soil to be reused.

Our team excavated and re-compacted underlying soils, removing relict hard structures. Inert concrete elements were crushed and stockpiled for re-use, ensuring 8,600m3 was recycled on site for the piling mat.

We backfilled and compacted material to Highways specification. This enabled construction of the piling mat, which was underlain with a designed geogrid membrane to achieve an average California bearing ratio (CBR) of 10%.

RESULTS

- £3m saved through re-use of materials on-site and production of 6F2 for a piling mat
- 40% reduction in programme time through concurrent works
- Avoided 2,000 lorry movements and disposal of 10,000m3 material to landfill through the MMP